
Effectiveness of a Specially Trained Pharmacist in a Rural Community Mental Health Center

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SPECIALLY TRAINED PHARMACISTS working in rural community mental health centers typically have a doctorate in pharmacy and extensive training in psychopharmacology, psychopathology, interviewing techniques, and psychotherapy. Additionally, their full-time training in a psychiatric facility, under regular supervision by senior medical staff, includes diagnostic assessment, treatment planning, coordination of multidisciplinary treatment, followup, and direct services to patients (1, 2).

In most community mental health centers (CMHCs), aside from being responsible for in-house medications, these pharmacists give both direct and indirect services. The major part of their direct service time is spent in outpatient drug maintenance clinics with chronic psychiatric patients, usually former residents of State hospitals, whose conditions have been previously diagnosed and stabilized by psychiatrists (3, 4). Although the symptoms of these patients can be controlled by psychotropic drugs, many of these drugs have short-term or long-term effects, and the patients must be monitored frequently for side effects.

The purpose of the drug maintenance clinics is to keep patients stabilized on medications, out of the hospital, and functioning effectively in their communities. The patients are usually seen individually until they are definitely stable, and then they are

moved into a group. Before the pharmacist conducts an interview, he generally reviews the patient's chart. During the interview, any problems that the patient is experiencing are discussed, and the pharmacist evaluates the patient's drug therapy and observes the patient for drug-related conditions such as dizziness, drowsiness, or shaking. If the drug therapy is adequate, the pharmacist renews the current prescription. If the patient is mildly unstable (physically or mentally, or both) or having side effects from the medication, the pharmacist may alter the dosage or the schedule, discontinue the medication, or prescribe additional drugs.

The pharmacist routinely consults with the psychiatrist about drug-maintenance patients. However, if a patient is unstable, the pharmacist immediately telephones the psychiatrist or refers the patient to him, or both (5). Although the pharmacist focuses on patients' medical problems, he also listens to their interpersonal, social, vocational, or economic problems, gives them support and guidance, and refers those with serious problems to other mental health professionals, vocational rehabilitation personnel, or the welfare department.

In rural areas particularly, chronic psychiatric patients who are stabilized are often seen in medication-monitoring groups that are co-led by a pharmacist and a local mental health professional. These groups provide support, socialization, and education for the patients, as well as monitoring of their stability. Powell and associates (6) report that pharmacological aftercare groups are an economical and effective way to provide services to chronic psychiatric patients. The patients in several medication-

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monitoring groups began to set social goals for themselves, that is, they started to participate in church and community activities. Part of each meeting was devoted to the sharing of experiences by the group members who were participating in social groups. Formerly, many of these patients had rarely or never ventured into the social life of the community—the support and encouragement provided by the group was invaluable.

Indirect services provided by a pharmacist include inservice training for CMHC staff in chemotherapy for psychiatric patients and other drug-related topics. The pharmacist consults formally and informally with staff members regarding specific drug therapy problems or questions. He also lectures to local mental health associations; county medical societies; organizations of mental health, health, and social welfare professionals; university classes; and civic groups.

In July 1973, a pharmacist joined the mental health service team of the Northeast Georgia CMHC system and began to provide all the services just described. The mental health clinics in this system serve more than 4,200 people and register about 54,000 outpatient visits yearly. The system, within a 10-county rural catchment area, includes an inpatient unit, a day hospital unit, and 8 outpatient clinics that serve heterogeneous clients. At least 15 percent of the patients have chronic psychiatric conditions. Both the staff and the patients of the mental health clinics readily accepted the pharmacist and availed themselves of his services.

To determine whether the pharmacist had any discernible effects on the services provided in the eight

outpatient clinics or on the well-being of their patients, we measured the impact, quantity, relative cost, and the quality of the services that he provided during the 3 years from July 1973 to June 1976.

Methods

To assess the quantity and the relative cost of the pharmacist's services, we compared the direct outpatient services that he delivered in the eight clinics with those of the staff psychiatrists during the 3 years. The rationale for this comparison was that the medication monitoring performed by a pharmacist in rural mental health clinics is similar to that by a psychiatrist or by a registered nurse under close supervision of a psychiatrist.

To assess the outpatient services objectively, we divided the 3 years into 6 equal intervals of 6 months each. We randomly selected 1 month from each interval and abstracted pertinent information from the CMHC's management information system reports on the outpatient services provided in the eight clinics. Specifically, the monthly reports indicated for each service provided an unduplicated count of patients seen, the total number and kinds of outpatient contacts, and the total hours of direct care.

Results

The results of the comparison of outpatient services delivered by the pharmacist and the psychiatrists are shown in table 1. During the first year, in the randomly selected months of October 1973 and March 1974, the CMHC system did not have a full-time psychiatrist. Two psychiatrists worked one-half day each week, and they served as backup consultants for

the emergency room physicians. These two psychiatrists were seeing 43–65 patients once a month; the pharmacist was seeing 116–195 patients about 1.6 times a month.

In July 1974, a full-time psychiatrist was hired, and the CMHC's inpatient unit was opened. Later, two more psychiatrists were hired, but no decline occurred in the pharmacist's outpatient services. During the 3 years, the pharmacist provided as many direct outpatient services as the 1.6 psychiatrists. The pharmacist's services freed the psychiatrists to provide services to inpatients, to perform psychiatric evaluations, to consult with and direct the functions of other mental health professionals, to provide inservice training, and to provide other indirect services such as education for the medical and paramedical community.

Concerning relative costs, the salary of a pharmacist is, at best, half that of a psychiatrist. Recruitment of psychiatrists for rural areas is difficult, particularly if much of their time is to be spent in traveling to rural clinics and monitoring the medical levels of stabilized chronic psychiatric patients. For this task, the salary of a psychiatrist would be \$20,000 more a year than that of a pharmacist. A conservative estimate for the 3 years is that the pharmacist saved the CMHC system \$60,000, which could be used to hire other direct service providers.

The quality of the pharmacist's services was assessed as part of a larger study of the current situation of chronic psychiatric outpatients who were stabilized on medication and living within the 10-county catchment area. A representative sample of 256 aftercare patients were asked to participate in the study, and 182 (71 percent) cooperated. The patients' satisfaction with their care was assessed along with their current functioning in the community, as rated by the patients and family members. Community adjustment was considered in two areas, personal adjustment and role skills, by means of a modified and shortened version of Ellsworth's measures (7, 8). Personal adjustment was assessed by measures of the presence and amount of confusion, anxiety, agitation-depression, alcohol or drug abuse, and interpersonal conflict. Role skills were assessed by measures of household skills, employment or job-seeking behaviors, and outside social activities.

The pharmacist was the primary therapist for a subsample of 30 stabilized aftercare patients—he was the only mental health professional that these patients saw regularly for all their mental health problems. The primary therapists for the remaining 152 patients were various mental health professionals, but these patients received their medications from the psychiatrist or the pharmacist, or both. As shown in table 2, the pharmacist's patients had a slightly

Table 1. Comparison of outpatient services delivered by a pharmacist and psychiatrists in eight mental health clinics, by study periods

<i>Study period</i>	<i>Number full-time professionals</i>	<i>Number unique¹ patients seen</i>	<i>Number contacts per patient</i>	<i>Total number contacts</i>	<i>Total hours direct care</i>
October 1973:					
Psychiatrist2	43	1.07	46	39.25
Pharmacist	1.0	116	1.61	187	47.50
March 1974:					
Psychiatrist2	65	1.00	65	43.75
Pharmacist	1.0	195	1.35	263	82.00
September 1974:					
Psychiatrist	1.2	82	1.17	96	80.25
Pharmacist	1.0	207	1.27	263	90.00
February 1975:					
Psychiatrist	2.2	118	1.09	129	78.75
Pharmacist	1.0	234	1.36	318	128.75
October 1975:					
Psychiatrist	3.0	114	1.21	138	48.00
Pharmacist	1.0	219	1.16	255	115.75
June 1976:					
Psychiatrist	3.0	238	1.21	289	81.50
Pharmacist	1.0	191	1.12	213	137.00
Overall average:					
Psychiatrist	1.63	110	1.15	127	61.92
Pharmacist	1.0	194	1.29	250	100.17

¹ Unduplicated count.

higher mean score, that is, more indicative of "health" than that of the other aftercare patients. However, only the personal adjustment score was significantly higher, $t(180) = 2.10, P < .037$.

The satisfaction scores for the pharmacist's patients and those for the other patients were similar in their ratings of staff interest in helping them and whether the staff spent as much time with them as they thought they needed (table 2). The pharmacist's patients reported being significantly more healthy since coming to the clinic than did the other patients, $t(170) = 1.97, P < .05$, and needing significantly less additional help than did the other patients, $t(172) = 3.46, P < .001$. The pharmacist's patients seemed to be functioning at least as well, and at least with as much satisfaction, with the services they were receiving as were the other aftercare patients.

Table 2. Mean ratings of chronic psychiatric outpatients, by assessment measures and primary therapists

Measure	Pharmacist (30 patients)	Other professionals (152 patients)	t
Community adjustment	2.74	2.58	1.44
Personal adjustment	2.91	2.61	12.10
Role skills	2.33	2.25	.70
Staff interest	3.79	3.80	.11
Staff spend time needed . . .	3.14	3.05	.83
Better since coming	4.13	3.72	11.97
Need further help	3.07	2.41	23.46

¹ $P < .05$. ² $P < .001$.

NOTE: Higher scores indicate greater health or satisfaction.

These positive findings indicate that the aftercare patients and their families may have come to view the patients' problems as possibly physiogenic rather than psychogenic and therefore more tangible and more manageable. As a consequence, they may not have exacerbated the problems by dwelling on them, and they accepted the regimen prescribed by the pharmacist.

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SYNOPSIS

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Pharmacists having training in psychopharmacology and psychiatry are being specially trained to function in community mental health centers as a resource in psychopharmacology

and to provide direct care to patients. Management information data over a 3-year period from eight rural mental health clinics indicate that these pharmacists can successfully maintain large numbers of stabilized psychiatric patients within their communities. The cost of a pharmacist's services is, conservatively, one-half that of a psychiatrist's services.

A followup study of the stabilized and active aftercare outpatients in the 10-county rural area in which the 8 clinics are located revealed that those patients who received all their direct care from the pharmacist were

functioning at a slightly healthier level than the other aftercare patients. The pharmacist's patients indicated that they were at least as satisfied with their care as were the aftercare patients who received care from other mental health professionals.

If the results of this study can be generalized to other community mental health centers in rural areas, a pharmacist can provide services effectively when psychiatrists are inaccessible or unavailable or when funds for mental health professionals are limited.